

*Application No. 09/781388*  
*Page 2*

*Amendment*  
*Attorney Docket No. S63.2Q-7132-US02*

**Amendments to the Claims:**

Claims 1-46. (cancelled)

Claim 47. (New) A method comprising the steps of:

providing a medical balloon at least partially constructed of a thermoplastic material, the medical balloon having a predetermined wall thickness and length, the balloon having a proximal end portion, a distal end portion and a center portion;

removing material from a portion of at least one of the distal and proximal end portions of the balloon to a desired reduced thickness while maintaining the temperature of substantially all of the balloon below about the glass transition temperature of the thermoplastic material or below the highest glass transition temperature of the thermoplastic material if the material is a block copolymer.

Claim 48. (New) The method of claim 47 wherein material is removed from a portion of the proximal end of the balloon to a desired thickness, wherein the portion of the proximal end consists of a proximal balloon waist, a proximal balloon cone, and any combination thereof.

Claim 49. (New) The method of claim 47 wherein material is removed from a portion of the distal end of the balloon to a desired thickness, wherein the portion of the distal end consists of a distal balloon waist, a distal balloon cone, and any combination thereof.

Claim 50. (New) The method of claim 47 wherein the at least one of the distal and proximal end portions of the balloon consist of at least one member of the group consisting of a proximal balloon waist, a distal balloon waist, a proximal balloon cone, a distal balloon cone and any combination thereof.

Claim 51. (New) The method of claim 47 wherein the material is removed by a process selected from the group consisting of grinding, chemical etching and any combination thereof.

Claim 52. (New) The method of claim 47 wherein after the removing step the wall thickness of the center portion is greater than the wall thickness of the at least one end portion from which material is removed.

Claim 53. (New) The method of claim 47 wherein after the removing step the wall thickness of the center portion is greater than the wall thickness of the at least one of the distal and proximal end portions of the balloon.

**Application No. 09/781388**  
**Page 3**

**Amendment**  
**Attorney Docket No. S63.2Q-7132-US02**

Claim 54. (New) The method of claim 47 wherein after the removing step, the thickness of the proximal end portion and the thickness of the distal end portion differ.

Claim 55. (New) The method of claim 47 wherein material is removed from both the proximal end portion and distal end portion to desired thicknesses during the removing step.

Claim 56. (New) The method of claim 47 wherein a coolant is directed at the balloon during the removing step.

Claim 57. (New) The method of claim 55 wherein the coolant is selected from the group consisting of water, air, compressed gasses and any combinations thereof.

Claim 58. (New) The method of claim 47 wherein the portion from which material is removed is maintained at a temperature cooler than the remainder of the balloon.

Claim 59. (New) The method of claim 47, wherein the thermoplastic material is chosen from the group consisting of polyamide elastomers, polyester elastomers, polyamides, polyesters, polyethylenes, polyurethanes, polyethylene ionomers, and ethylene vinyl acetates.

Claim 60. (New) A method comprising the steps of:

providing a medical balloon of thermoplastic material having a predetermined wall thickness and length, the balloon having a proximal end portion, a distal end portion and a center portion;

removing material from at least one portion of the proximal end and distal end portions of the balloon to a desired reduced thickness; and

expanding the balloon to a desired pressure.

Claim 61. (New) The method of claim 60 wherein the temperature of substantially all of the balloon is maintained below the glass transition temperature of the thermoplastic material or below the highest glass transition temperature of the thermoplastic material if the material is a block copolymer during the removing step.

Claim 62. (New) The method of claim 60 wherein the temperature of the balloon is maintained below the glass transition temperature of the thermoplastic material or below the highest glass transition temperature of the thermoplastic material if the material is a block copolymer during the expanding step.

Claim 63. (New) The method of claim 60 wherein the balloon has a substantially constant wall thickness over substantially its entire length on expansion to the desired pressure.